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The important thing is to get the tops of the plants covered with a perfect coating of the sulfur dust before the rust appears; the first application should be made as soon as the tops have made some little growth, say about three weeks after cutting stops, and a second and perhaps a third application should follow at intervals of about one month each. In some cases it may prove advisable to spray the plants first with some soap spray, to be followed by the sulfur dust to insure the sulfur adhering to the plants. If the best grade of flowers of sulfur be employed, it may be possible to cover an acre with about fifty cents worth. SMITH insists also upon the supreme importance of destroying all wild asparagus plants near the regular fields, since on these the rust first appears, and from them the field soon becomes infested.—E. MEAD WILCOX.

Germination in myxomycetes.—In a preliminary paper on the germination of the spores of myxomycetes, JAHN recognizes two distinct types of germination.²⁶ The first type is represented by a single species of *Ceratiomyxa*, whose spore contains four nuclei, the spore content escaping as an amoeba which immediately divides into eight swarmspores. In the second type, embracing all other myxomycetes, the spores are uninucleate and produce a single swarmspore. Regarding the conditions of germination, the following observations are made. The amoeba escapes by rupturing the spore-membrane by osmotic pressure, and if this is increased germination is prevented. The spores of *Stemonitis* do not germinate when placed in water, but if after being soaked they are allowed to dry they will germinate readily in water, an observation formerly made by LISTER. JAHN concludes that such spores contain a latent enzyme which is made active by the process of moistening and drying. Since maltose but not other sugars causes germination, this assumption is strengthened, as maltose is the decomposition product produced from glycogen stored in the spores.—H. HASSELBRING.

Blight canker.—WHETZEL has published the results of his study of a canker of apple trees in New York state²⁸ due to the same organism, *Bacillus amylovorus*, that is responsible for the well-known fire blight of apples and pears. This canker has been known in a general way for some years, but this seems to be the first demonstration, by the usual inoculation experiments, of the bacterial nature of the disease. Infection seems to take place only through wounds, and these may be due to pruning, to accidental wounding or “barking” of the tree, or to the work of insects. The germ also enters at times through “water sprouts,” since cankers are often seen to appear about the base of such blighted shoots. Pear trees known to be affected with the blight should not be allowed to remain in the neighborhood of an apple orchard, and great care should be taken to prevent the dissemination of the germs on the pruning instruments. Some variation in resistance to the canker was noted.—E. MEAD WILCOX.

²⁷ JAHN, E., *Myxomycetenstudien*. Ber. Deutsch. Bot. Gesells. **23**:489-497. 1906.

²⁸ WHETZEL, H. H., The blight canker of apple trees. Bull. Cornell Exp. Sta. 236:99-138. *figs.* 51-84. 1906.